

ROYAL RIVER
YARMOUTH
MAINE

SURVEY
(REVIEW OF REPORTS)

ENGINEERING DIVISION WORKING COPY
RETURN TO FILE

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
WALTHAM, MASS.

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS

424 TRAPELO ROAD
WALTHAM, MASS. 02154

ADDRESS REPLY TO:
DIVISION ENGINEER

REFER TO FILE NO. NEDED-R

9 June 1965

SUBJECT: Survey (Review of Reports) on Royal River,
Yarmouth, Maine

TO: Chief of Engineers
ATTN: ENGCW-PD

1. Reference is made to 1st Indorsement, ENGCW-PD dated 16 March 1965 to letter NEDED-R, dated 8 February 1965, subject: "Detailed Project Report for Small Navigation Project, Royal River, Yarmouth, Maine." The project approved therein was formally adopted on 27 April 1965. A brief, unfavorable report has been prepared in response to the survey study Resolution of the House Public Works Committee, adopted 25 August 1960.

2. In accordance with EM 1120-2-101, paragraph 1-126, and Multiple letter dated 24 October 1963, subject: "Preparation of Drafts of Reports of Board of Engineers for Rivers and Harbors and Chief of Engineers," there are inclosed:

- a. Copies 16 through 28 of subject report;
- b. Two copies of the letter of transmittal to the Board of Engineers for Rivers and Harbors;
- c. Three copies of a reduced size display map;
- d. Fifteen copies of the public notice of the report and one copy of the mailing list;
- e. Five copies of Supplement S-148 in addition to those bound in the reports;
- f. A copy of the transcript of the public hearing held on 28 August 1962.

NEDED-R

9 June 1965

SUBJECT: Survey (Review of Reports) on Royal River,
Yarmouth, Maine

3. Advance copies of the public notice of the report are scheduled to be sent to Congressmen on 14 June 1965. Public release of the notice is planned for 18 June 1965.

FOR THE DIVISION ENGINEER:

6 Incl
as

JOHN WM. LESLIE
Chief, Engineering Division

**U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS**

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**ADDRESS REPLY TO:
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9 June 1965

**SUBJECT: Survey (Review of Reports) on Royal River, Yarmouth,
Maine**

**TO: Chief of Engineers
ATTN: ENGCW-PD**

SYLLABUS

The Chief of Engineers on 16 March 1965 under authority of Section 107 of the 1960 River and Harbor Act, approved for accomplishment improvement of navigation facilities at Royal River, Yarmouth, Maine. Formal adoption as a Federal project was made on 27 April 1965. The Division Engineer finds that no further navigation improvement in addition to that authorized is warranted at this time.

* * * * *

1. This report is submitted in compliance with a resolution adopted 25 August 1960.

"RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES HOUSE OF REPRESENTATIVES, UNITED STATES, That the Board of Engineers for Rivers and Harbors be, and is hereby, requested to review the reports on Royal River, Maine, printed in House Document 60, 41st Congress, 3rd Session, and other reports with a view to determining whether the recommendations contained therein should be modified at this time with particular reference to improvements for navigation."

2. Royal River is a small coastal stream which empties into Casco Bay at a point 11 miles northeast of Portland, Maine. It drains an area of approximately 11 square miles. In the tidal portion of the river, there is a winding navigable channel which extends from Parker's Point in Casco Bay, 2-1/4 miles upstream to the Interstate 95 Highway Bridge in Yarmouth. Except for a minor 4-foot shoal near the head of the existing

project, the channel generally has a 6-foot depth at mean low water. The entire length of channel is well protected from all winds. A natural approach channel provides depths in excess of 8 feet from deep water west of Cousins Island to Parker Point. However, since the Cousins Island bridge limits craft with vertical clearances in excess of 20 feet, direct approach from deep water northeast of Cousins Island was provided by a channel dredged by the State in 1955.

3. The mean range of tide in Royal River is 9.0 feet; the spring range is 10.4 feet. The locality is shown on U. S. Coast and Geodetic Survey Chart No. 315, and on the map accompanying this report.

4. The Town of Yarmouth is located 11 miles north of Maine's largest population center, the Portland - South Portland area. In 1960, Yarmouth, which includes Cousins and Littlejohn Islands, reported a permanent population of 3,517 and estates assessed at \$30,620,000. A popular summer resort, Yarmouth's population is increased considerably during the summer months.

5. The Casco Bay area, into which Royal River flows, is frequented by many transient yachts and pleasure craft each summer season. With its numerous islands, sounds and bays, it is a natural attraction for visiting yachtsmen. Industry in Yarmouth is centered primarily around the fishing and lobstering fleet and around the retail establishments which cater to the needs of the permanent and summer population. The Town is served by the Canadian National and Maine Central Railroads and by Interstate 95, a modern 4-lane divided highway.

6. The existing project, which was adopted by Congress on 3 March 1871, provides for the enlargement of the channel through the bar at Gravel Point to a width of not less than 100 feet and a depth of not less than 4.5 feet below mean low water up to the head of commercial navigation at Yarmouth; and the removal of several ledges near the village of Yarmouth. In March 1882, a slide occurred from the high southern bank of the river into the existing natural channel about 2 miles below Yarmouth opposite Wolfe's Point. Under authority of the River and Harbor Act passed 2 August 1882, the original project was amended to include construction of a rubblestone jetty, 195 feet long opposite Wolfe's Point; and to dredge a channel to 4-1/2 feet below mean low water through the obstructed channel. This survey report was authorized to review the previous reports to determine whether the existing project should be modified at this time. A public hearing was held in Yarmouth, Maine on 28 August 1962 to determine the nature and extent of improvements desired by local interests.

7. The principle difficulties are the lack of anchorage area and insufficient channel depths. The plan of improvement advanced by local interests for consideration consists of a channel 100 feet wide and 8 feet deep from that depth in Casco Bay to the head of navigation in Yarmouth, and an anchorage area of 13 to 14 acres dredged to a depth of 6 feet.

8. Consideration was given to the requested plan of improvement. Since the carriers owned by the Royal River Packing Co. draw 7-1/2 to 8 feet fully loaded, a channel of 8-foot depth is considered necessary. The present width of the channel at the 6 foot depth is 100 feet which is sufficient for the majority of the craft using the waterway. Although a 100-foot width for an 8-foot channel would be desirable, because of the relative calmness of the waterway, the number of current and prospective deep draft vessels expected to use the channel, and the fact that considerable expenses can be avoided by elimination of the need to excavate a large quantity of ledge and to dredge a greater amount of material, it was considered that an 8 ft. by 80-foot channel would be sufficient to meet the needs of the existing and prospective deep draft commercial fishing fleet. The layout of the proposed channel would follow closely the alignment of the existing natural channel taking advantage of the prevailing 6-foot depths.

9. Studies were made to determine the number of recreational craft that can reasonably be expected to be purchased over the life of the project as a result of the proposed improvement. The natural attractiveness of the Casco Bay area, the ease of access over Interstate Route 95 to the vicinity of the anchorage, the proximity of the project to the Portland - So. Portland area, and the increasing popularity of recreational boating are factors which should insure an increasing demand for mooring and berthing facilities at Royal River.

10. In consideration of the foregoing, a plan of improvement best suited to the navigation needs has been developed. This plan would modify the existing project to provide for:

A channel 80 feet wide, 8 feet deep at mlw from the mouth of the river, 2-1/4 miles upstream to below the Interstate 95 Highway Bridge; and an anchorage area of 8 acres dredged to a depth of 6 feet below mean low water. The plan is shown on the inclosed map.

The plan represents the most economical and practical development for permitting increased use of both existing and future facilities. The scope and costs of the plan are of such magnitude as to make the plan eligible for accomplishment under the general authority of Section 107 of the 1960 River and Harbor Act.

11. All Federal, State, and local agencies thought to be interested or affected by the proposed navigation improvement were consulted during the study and they concur in the project plan.

12. The benefits to be derived from improvement of the channel will accrue entirely to the fishing industry and therefore are considered to be general in nature. Therefore, no local cash contribution would be required for that portion of the project. The benefits to be derived from the improvement of the anchorage are partly local and partly general in nature. It is considered that local interests should share in the project costs commensurate with the benefits to be derived.

13. The recommendation for project approval was made subject to the condition that local interests:

a. Contribute 28 percent of the first cost of construction of the 8-acre anchorage.

b. Assume full responsibility for all project costs in excess of the \$200,000 Corps of Engineers cost limitation under Section 107 of the 1960 River and Harbor Act.

c. Hold and save the United States free from damages which may result from construction and maintenance of the project.

d. Provide, without cost to the United States, all necessary lands, easements, and rights-of-way, including suitably diked spoil disposal areas needed for the construction and maintenance of the project.

e. Maintain without cost to the United States the existing public landing with the necessary access roads, parking areas and other needed public use shore facilities available to all on equal terms.

14. State and local officials were consulted concerning the suitability of this plan of improvement. A meeting was held in Yarmouth on 11 September 1964. Approval of the plan was expressed at this meeting. By letters dated 30 September 1964, State and local officials commented on the adequacy of the proposed plan for meeting the navigational needs of the harbor and also indicated that they would be willing to meet the requirements of local cooperation, subject to action by State legislature and local town meetings.

15. Accordingly, the Chief of Engineers on 27 April 1965, under authority of Section 107 of the 1960 River and Harbor Act, approved for accomplishment the aforementioned navigation improvement for Royal River, Maine.

16. The Division Engineer recommends no further navigation improvement for Royal River, Maine at this time.

2 Incl

1. Map
2. Add'l Info. called
for by Senate
Resolution 148

R. R. PLOGER
Brigadier General, USA
Division Engineer



ROYAL RIVER, YARMOUTH, MAINE

Information Called for by Senate Resolution 148, 85th Congress, Adopted
28 January 1958

1. This study considered the need and justification for providing navigation improvements for recreational and fishing craft at Royal River, situated about 11 miles northeast of Portland, Maine in the town of Yarmouth.

2. The principal difficulties at Royal River are the lack of anchorage area for small lobster and recreational craft and insufficient channel depths to the cannery for fish carriers. The study found that deeper channel for the fishing craft and adequate anchorage for existing and prospective lobster and recreational craft are needed and are justified.

3. As a result of the study, the Chief of Engineers approved for accomplishment an improvement for Royal River under authority of Section 107 of the 1960 River and Harbor Act. The improvement was formally adopted as a Federal project on 27 April 1965 and provides for a channel 8 feet deep, 80 feet wide from the State channel in Casco Bay to the commercial wharf at Yarmouth and an anchorage of 8 acres, 6 feet deep, downstream of the Interstate 95 Highway Bridge.

4. At the public hearing local interests requested a channel 8 feet deep and 100 feet wide from Casco Bay to the commercial wharves at Yarmouth, and 13 to 14 acres of anchorage 6 feet deep. Provision of the wider channel and the greater area of anchorage space than that recommended could not be justified in view of the relatively high cost of removing ledge and hard materials. It is considered that the project dimensions as approved would be sufficient to meet the needs of the existing and prospective deep-draft commercial fishing fleet and recreational fleet.

5. Local interests have indicated the plan of improvement authorized would meet the needs of present and prospective navigation.